

Condensed Transcript of the
Deposition of
Peter Thorne, M.S., Ph.D.

Date: June 6, 2006

Case: Hodgins v. Carlisle Engineered Products

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IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF OHIO
EASTERN DIVISION

PIERRE HODGINS,)	
)	
Plaintiff,)	
)	
vs.)	No. 1:02-CV-1454
)	
CARLISLE ENGINEERED)	
PRODUCTS, INC., et al.,)	
)	
Defendants.)	

A P P E A R A N C E S

VIA VIDEO CONFERENCE:

D. DAVID ALTMAN COMPANY
BY: D. David Altman, Esquire
12 East Eighth Street, Suite 200
Cincinnati, Ohio 45202
513-721-2180
Attorneys for Plaintiff;

VIA VIDEO CONFERENCE:

VORYS, SATER, SEYMOUR & PEASE
BY: Marcel C. Duhamel, Esquire
2100 One Cleveland Center
1375 East Ninth Street
Cleveland, Ohio 44114-1724
216-479-6100
Attorneys for Defendants.

DEPOSITION OF PETER THORNE, M. S. , PH. D. ,

taken pursuant to notice and agreement of the parties, at the University of Iowa, 23 Lindquist Center South, Video Conference Room, Iowa City, Iowa, on June 6, 2006, commencing at 9:15 a.m., before Tammy Jones, Certified Shorthand Reporter in and for the State of Iowa.

<p style="text-align: right;">Page 2</p> <p>1 INDEX 2 Witness 3 PETER THORNE, M.S., PH.D. 4 5 Examination Page 6 Mr. Duhamel..... 3 7 Mr. Altman.....82 8 9 10 EXHIBITS 11 Thorne Exhibit Marked 12 Nos. 1 and 2..... 3 13 No. 3.....76 14 15 16 17 18 19 20 21 22 23 Certificate of Court Reporter.....85 24 25</p>	<p style="text-align: right;">Page 4</p> <p>1 Q. And I'm going to do my best to pause before 2 I begin speaking after you finish a sentence, so that 3 I avoid speaking over you. All right? 4 A. Fine. 5 Q. If at some point I should speak over you, 6 please let me know. Raise your hand or do something 7 to indicate that I interrupted you, because I do not 8 intend to do that, and I do want you to be able to 9 answer every question fully. Okay? 10 A. Yes. And I will also do my best not to 11 interrupt you. 12 Q. Fair enough. Thank you. 13 Doctor, I gather you have testified before; 14 is that correct? 15 A. Yes. 16 Q. Very briefly, as I'm sure you're aware, the 17 court reporter is taking down what we say. It would 18 be helpful if you would confine your responses to 19 verbal responses, rather than shrugs of the shoulders 20 or statements like "uh-huh" or "huh-uh." Is that all 21 right? 22 A. Yes. 23 Q. If I ask you a question and you do not know 24 the answer, an "I don't know" is, of course, a 25 perfectly accepted response. All right?</p>
<p style="text-align: right;">Page 3</p> <p>1 JUNE 6, 2006 2 (Thorne Exhibits 1 and 2 were marked 3 for identification.) 4 PETER THORNE, M.S., PH.D., 5 being first duly sworn, was examined and 6 testified as follows: 7 EXAMINATION 8 BY MR. DUHAMEL: 9 Q. Good morning, Dr. Thorne. 10 A. Good morning. 11 Q. My name is Marcel Duhamel. I represent the 12 Defendants in this case in which I understand you 13 have proffered an expert opinion to the Plaintiffs. 14 Is that correct? 15 A. Correct. 16 Q. Doctor, we're taking this deposition by 17 video conference today, and as I'm sure you've 18 noticed, there seems to be a bit of a transmission 19 delay, maybe a couple of seconds. So what I'm going 20 to ask is, after I ask a question, if you would pause 21 for a moment before you begin to answer it to ensure 22 that I have finished speaking and to give your 23 Counsel a chance to object, if he feels it's 24 appropriate you do that. Is that okay? 25 A. Yes.</p>	<p style="text-align: right;">Page 5</p> <p>1 A. Yes. 2 Q. And, of course, if you don't remember the 3 answer, simply tell me, "I don't remember," and 4 that's also perfectly acceptable. Okay? 5 A. Right. 6 Q. If I ask a question, as is likely, that you 7 don't understand, please do not answer it until you 8 ask me to rephrase it and I have articulated the 9 question in a way that you understand. Is that fair? 10 A. That's fair. 11 Q. If you do answer a question that I've 12 asked, the record will assume that you understood it 13 and you intended to answer it the way you answered 14 it. Is that fair? 15 A. Yes. 16 Q. Doctor, are you taking any medication, or 17 do you have any medical condition that would impair 18 your memory or your ability to concentrate or to give 19 accurate testimony today? 20 A. No. 21 Q. Doctor, before the deposition began, we 22 marked Exhibit 1. Could you locate that and tell me 23 what it is? 24 A. Exhibit 1 is an expert report that I 25 prepared for the purposes of this case.</p>

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1 Q. I would like you to turn to Page 2 of
2 Exhibit 1. I should have thought of this before we
3 marked it, but I didn't. Is Page 2 the substitute
4 page that you sent after preparation of the report?

5 **A. In the report that's marked Exhibit 1, the**
6 **Page 2 is as originally submitted, and then affixed**
7 **to the end of it is the substitute Page 2 that was**
8 **submitted after the initial report.**

9 Q. Okay. When did you submit the substitute
10 page to your -- to Counsel for the Plaintiffs?

11 **A. I'm not certain of the date, but it was**
12 **perhaps within two months of the initial submission.**
13 **I could check that date for you, if you would like.**

14 Q. Well, let's put it this way. What caused
15 the substitution? Did you notice that something
16 needed to be changed to your report?

17 **A. In reexamining the report subsequent to the**
18 **initial, when I came back to the report and in**
19 **discussions I was having about the content of my**
20 **report and the case, it was noted both by me and by**
21 **one of the associates in Dr. Altman -- or**
22 **Mr. Altman's firm that under B it was a bit ambiguous**
23 **the way I had initially written it. And so I simply**
24 **offered to clarify that language when it was pointed**
25 **out to me that it was not as clear as it could have**

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1 **been. So to answer, I noticed the problem in**
2 **discussions with it, and I offered to put in a**
3 **substitute page, and I subsequently did so.**

4 Q. Could you summarize for me what the
5 material differences are between the substitute page
6 and the original page?

7 **A. Yes. It's very simple. The substitute**
8 **page describes what is known as a DNAPL, and the**
9 **initial page did not mention DNAPLs as a class of**
10 **chlorinated solvents or a designation of chlorinated**
11 **solvents.**

12 MR. ALTMAN: Marcel, Dave Altman.

13 MR. DUHAMEL: Yes.

14 MR. ALTMAN: Could you read back --
15 could the court reporter read back what Dr. Thorne
16 said? I was interrupted by my office asking about
17 those exhibits -- and just the part where you asked
18 him the question, why did you make the changes or
19 whatever that question was?

20 (The reporter read the requested
21 portion of the record.)

22 MR. ALTMAN: Thank you.

23 Q. (BY MR. DUHAMEL) Doctor, is the language
24 under Paragraph B before Item B(1) the only language
25 that changed in your report?

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1 **A. Yes.**

2 Q. Prior to the deposition, we marked
3 Exhibit 2. I would like you to locate this and
4 identify it for me, if you would.

5 **A. Exhibit 2 is a copy of my Curriculum Vitae**
6 **submitted at the time I was contacted about serving**
7 **as an expert in this case.**

8 Q. I notice it indicates that it was prepared
9 on August 18, 2005. Is that accurate?

10 **A. Yes.**

11 Q. Have there been any significant changes or
12 additions to your Curriculum Vitae since the date on
13 which you prepared Exhibit 2?

14 **A. There are five subsequent Curriculum Vitae**
15 **since this time as it's constantly being updated to**
16 **reflect additional teaching, new grant support and**
17 **further publications. It's an ongoing process.**

18 Q. Are you able, sitting here today, to
19 identify for me the additional publications since
20 August 18, 2005?

21 **A. No. And the reason is that there -- I**
22 **typically have about 16 -- 10 to 16 publications per**
23 **year at this point in my career, and I can't offer**
24 **those full citations off the top of my head. I'd be**
25 **happy to provide them for you.**

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1 Q. Well, that's reasonable, and I will ask
2 that you provide them, if you would be willing to do
3 so.

4 **A. Certainly.**

5 Q. Doctor, your Curriculum Vitae --

6 MR. ALTMAN: Peter --

7 THE WITNESS: Yes.

8 MR. ALTMAN: You provide those to me,
9 and we will provide them to Marcel.

10 THE WITNESS: I understand.

11 Q. (BY MR. DUHAMEL) Doctor, if you could turn
12 to Page 51 of your Curriculum Vitae?

13 **A. (Pause.)**

14 **Okay.**

15 Q. Beginning on Page 51 and continuing onto
16 Page 52, there is a list under the subject
17 Professional Consulting or Services as Expert
18 Witness. Do you see that list?

19 **A. Yes.**

20 Q. Is that list up to date?

21 **A. Yes.**

22 Q. There are a few entries on this list I'd
23 like to ask you some specific questions about. The
24 first one is on Page 52, and it shows a range from
25 1997 to 1999, and it indicates Altman & Calardo Co.,

3 (Pages 6 to 9)

Page 10

1 Cincinnati, Ohio. Do you see that?

2 **A. Yes.**

3 Q. Can you describe for me the services that
4 you were providing under that entry?

5 **A. Yes. I served as an advisor on some legal
6 matters as well as serving as an expert on a case
7 during that time.**

8 Q. Which case did you serve as an expert on
9 during that time?

10 **A. (Pause.)**

11 **I'm pausing to see if I can remember the
12 name of the case.**

13 **(Pause.)**

14 **I don't remember the name of the case at
15 this point.**

16 Q. Do you recall if he represented a plaintiff
17 or a defendant?

18 **A. I don't remember which case it was, so I
19 don't know.**

20 Q. It also said you provided some consulting
21 in addition to the expert testimony; is that correct?

22 **A. Yes.**

23 Q. Could you describe what you meant by that?

24 **A. My recollection is that at that time, there
25 were some legal matters that Mr. Altman would contact**

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1 **me about from time to time and ask for some expertise
2 in toxicology in terms of matters that he was
3 considering.**

4 Q. You did not provide expert reports as a
5 result of those consultations?

6 **A. No.**

7 Q. Okay. A few entries down, there's another
8 entry, 2000 to 2006, D. David Altman Co., Cincinnati,
9 Ohio. Do you see that?

10 **A. Yes.**

11 Q. First of all, is the D. David Altman in
12 that entry the same as the Altman in the entry we
13 were discussing a moment ago?

14 **A. Yes.**

15 Q. Could you describe for me the work that you
16 did with respect to that second entry?

17 **A. The work was similar to what we just
18 described in terms of occasionally answering
19 questions that he would pose regarding matters of
20 toxicology interest, and in addition to that, I
21 served on one case as an expert witness where I
22 offered a deposition.**

23 Q. Which case was that?

24 **A. It was a case referred to as Cornett versus
25 Welding Alloys, Incorporated.**

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1 Q. And that's reflected on your CV; is that
2 correct?

3 **A. Yes, it is.**

4 Q. At what page?

5 **A. It's Exhibit 1, Page 11. I'm sorry. Did
6 you say "CV"? It's in my report, which is Exhibit 1.**

7 Q. Okay. All right. It's not on your CV, per
8 se, but it is on Exhibit 1; is that correct?

9 **A. Correct.**

10 Q. Okay. What kind of case was that?

11 **A. Can you clarify what you mean by "what kind
12 of case"?**

13 Q. Do you recall what the issues in that case
14 were?

15 **A. Yes, I do. There was --**

16 Q. What were those issues?

17 **A. The case involved a manufacturing facility
18 that was adjacent to a property, and there were
19 concerns among the owners of that property of
20 materials coming from the manufacturing facility to
21 their property and the fact that there wasn't proper
22 notification to responsible authorities with regard
23 to environmental regulations -- environmental
24 regulations, and there was also concern about the
25 contaminants causing adverse health effects among**

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1 **residents living in that vicinity.**

2 Q. If I understand correctly, you were deposed
3 in that case?

4 **A. Yes.**

5 Q. Do you recall the substance of the opinion
6 you rendered in that case?

7 **A. My recollection is that I offered specific
8 information about the toxicologic properties of the
9 materials that were in use at that facility and
10 materials that were identified off site from that
11 facility on adjacent properties.**

12 Q. Did you render any opinion in that case as
13 to whether any individual in fact had suffered any
14 adverse health effect as a result of exposure to any
15 substance?

16 **A. There were medical experts involved with
17 that case that offered medical opinions regarding the
18 health consequences of exposures. I was offering
19 expert opinion on the toxicologic properties of those
20 materials and their movement via aerosol transport.**

21 Q. So if I understand correctly -- and please
22 tell me if this is not correct -- you were not
23 expressing any opinion as to whether anyone had been
24 exposed to those chemicals or had suffered an adverse
25 effect as a result of the exposure, but, instead,

4 (Pages 10 to 13)

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1 were expressing an opinion as to what the potential
2 toxicological effect of exposure could be?

3 **A. I was offering an opinion both regarding**
4 **the toxicologic properties and their effects and**
5 **transport of materials via aerosol transmission, so**
6 **that would be an exposure pathway. I did not examine**
7 **the patients, nor did I offer a medical opinion based**
8 **on examining a patient.**

9 Q. How were the substances at issue in that
10 case transported off the site of the manufacturer?

11 **A. One of the principal manners by which the**
12 **materials were transported off site was via air**
13 **emissions from the facility that were coming from a**
14 **variety of industrial processes at that facility, and**
15 **that was the area that I was primarily concerned with**
16 **from a toxicologic standpoint.**

17 Q. Did you address, in the opinion you
18 rendered in that case or in your testimony, transport
19 through groundwater?

20 **A. No, I don't believe so.**

21 Q. Did you end up testifying at trial in that
22 matter?

23 **A. I did not.**

24 Q. There is one entry on Page 11 of Exhibit 1
25 above Cornett versus Welding Alloys. That's Sherlock

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1 Homes versus Margaret Nims. Do you see that?

2 **A. Yes.**

3 Q. First of all, was that trial testimony or
4 deposition testimony or both?

5 **A. Trial testimony.**

6 Q. Had you been deposed in that matter?

7 **A. No.**

8 Q. Who retained you to testify in that case?

9 **A. The firm representing a business referred**
10 **to as Sherlock Homes.**

11 Q. What was the nature of the dispute, if you
12 recall?

13 **A. Sherlock Homes is a company that sells**
14 **manufactured housing. And they had entered into a**
15 **contract with Mrs. Nims to purchase a dem- -- a demo**
16 **or a lot model of a manufactured home, which was then**
17 **delivered to her and put on the property that she had**
18 **so designated. She then refused to pay for that**
19 **delivery and for the home on the basis that she felt**
20 **she was exposed to formaldehyde from that home. And**
21 **she had not understood that there were warnings**
22 **placed about formaldehyde exposure, and there was**
23 **debate within the trial over whether or not she was**
24 **made aware of that properly or not. And as I**
25 **understood it, the company was seeking payment for**

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1 **delivery of that home and for a portion of its use.**

2 Q. What was the nature of your testimony in
3 that case?

4 **A. I testified with regard to the potential**
5 **health effects of formaldehyde exposure, formaldehyde**
6 **exposures typically seen in manufactured housing over**
7 **time, industry standards regarding the manufacture of**
8 **plywood and particle board with regard to**
9 **formaldehyde emission and formaldehyde exposures**
10 **among people who smoke cigarettes.**

11 Q. Was the defendant in this case a smoker?

12 **A. Yes.**

13 Q. And did you express any substantive
14 opinions through your testimony?

15 **A. Yes, I did. I expressed the opinion that**
16 **this particular manufactured home, having been on the**
17 **lot for about a year's time, would have off-gassed**
18 **formaldehyde and would have a lower amount of**
19 **airborne formaldehyde than would a newly-manufactured**
20 **home. I also expressed the opinion that based on**
21 **published information and data available, generally,**
22 **that the exposures she would be likely to attain from**
23 **entering that home for one hour would be considerably**
24 **less than she would receive from smoking two packs of**
25 **cigarettes per day.**

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1 Q. Let me state this as a proposition and see
2 if you would agree with it based, at least in part,
3 on the description of the opinion that you rendered
4 in the Sherlock Homes case. Would you agree that a
5 substance's potential toxicological impact on human
6 health depends, at least in part, on how the people
7 or person in question is exposed to the substance and
8 at what dose and over what period of time?

9 MR. ALTMAN: Objection.

10 **A. Are you speaking generally, or are you**
11 **speaking specifically with regard to the Sherlock**
12 **Homes versus Nims case?**

13 Q. I'm speaking generally.

14 **A. Okay. So we're not talking about --**

15 MR. ALTMAN: Wait a minute, Peter.
16 Peter.

17 THE WITNESS: Yes.

18 MR. ALTMAN: Continuing objection.

19 Go ahead.

20 Continuing objection.

21 Go ahead.

22 **A. So as I understand the question that you've**
23 **asked me, you've asked if -- are you referring to**
24 **exposure to a single compound, or are you referring**
25 **to exposure to an array of compounds in a complex**

5 (Pages 14 to 17)

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1 mixture? Can you clarify that for me, please?

2 Q. (BY MR. DUHAMEL) Sure.

3 Let's start by asking the question with
4 respect to exposure to a single compound.

5 A. Okay. Such as perhaps --

6 MR. ALTMAN: Continuing -- Peter,
7 pause. Continuing objection.

8 Go ahead.

9 A. Well, of course, exposures to an individual
10 compound are a very rare event in the real world and
11 when we're talking about exposures to people. If
12 you're talking about perhaps a laboratory rat or a
13 laboratory mouse, where you can control everything
14 exposed to an individual substance, in some cases,
15 the route of exposure will make a difference, and in
16 some cases, it does not. It will depend upon the
17 compound. In the real world, where you have exposure
18 to complex mixtures with people who are not
19 genetically identical, there will be individual
20 susceptibilities. There will be also -- which are
21 partially genetically determined. Also,
22 susceptibility is determined by the age of the
23 individual, in some cases their gender, underlying
24 health problems. And when they're exposed to an
25 array of compounds, exposure to one can certainly

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1 affect the response to another.

2 Q. Have you ever published on that subject,
3 expressing that view?

4 A. Yes.

5 Q. Could you identify for me those
6 publications?

7 A. Well, the one that comes to mind first is a
8 textbook. It's called -- it's referred to as
9 Casarett & Doull's Toxicology, "The Basic Science of
10 Poisons," and it's in its sixth edition, and I
11 published a chapter in that textbook on occupational
12 toxicology. And in that chapter, I created a diagram
13 which indicates a pathway from exposure to response
14 and indicates underlying susceptibility factors and
15 the influence of co-exposures to agents. There are
16 other examples in my publications over the years, but
17 that's perhaps the most direct.

18 Q. Other than the two pieces of testimony
19 history on Page 11 of Exhibit 1, have you provided
20 any other testimony as an expert witness in the last
21 five years?

22 A. No.

23 Q. How about in the last ten years?

24 A. I believe I was deposed in one other case
25 nearly ten years ago, and I'm afraid I don't remember

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1 the particulars of that case, as I sit here now.

2 Q. Do you know if you have ever testified on
3 behalf of a defendant?

4 A. (Pause.)

5 I see that Mr. Altman is answering the door
6 here, so I'll pause a moment for him.

7 MR. ALTMAN: Thank you very much. I am
8 back at the table.

9 A. Okay. I will resume.

10 I have served as an expert for defendants.
11 I don't believe that I've been deposed in any of
12 those cases or given testimony at trial.

13 Q. Did you say --

14 MR. ALTMAN: Marcel, excuse me.

15 Peter, I'll instruct you to review with
16 both Counsel whether any information, unless you know
17 sitting there, can be provided on those cases where
18 you've been a consultant. I don't want you to
19 prejudice whatever those matters are, and so I'm
20 going to ask you to be cautious concerning any
21 specific answers.

22 THE WITNESS: Yes, I understand that.
23 Thank you.

24 Q. (BY MR. DUHAMEL) Doctor, are you able --
25 well, why don't we do it this way. If you could look

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1 at Pages 51 to 52, Exhibit 2?

2 A. Yes.

3 Q. If we could just go through the list, and
4 if you could identify for me, one at a time, which of
5 the entities -- or, rather, what you did for each of
6 those entities, I would appreciate it.

7 A. Starting with 1982?

8 Q. Yes, please.

9 A. I may not be able to remember all of them,
10 but I will certainly do my best.

11 It begins with 1982, Union Carbide
12 Corporation. I was a graduate student at the time,
13 and I worked with a professor. And we were
14 considering the degradation of aldicarb in soil.

15 1982, Kikkoman Foods, Incorporated,
16 Walworth, Wisconsin. This is a manufacturer of soy
17 sauce, among other things. And they were interested
18 in creating a low-sodium soy sauce. And so we
19 designed a process that would exchange potassium for
20 sodium, and I tested some of the materials that would
21 be used in that process for compliance with FDA
22 guidelines on materials that come in contact with
23 food. And, again, that was under the guidance and
24 collaboration of a professor I was working with.

25 Union Carbide Corporation, 1983 to '87.

6 (Pages 18 to 21)

1 This was then a follow-up study on aldicarb
2 degradation in various types of soils, depending upon
3 whether they had bacteria in the soil or whether they
4 were sterile.

5 1985, Environmental Quality Associates.

6 This was some work done on an indoor air quality
7 problem, and I performed some analysis of samples.

8 1986 to 1987, Proctor & Gamble Company,
9 Cincinnati, Ohio. I worked as a consultant to
10 Proctor & Gamble in their toxicology division. They
11 were trying to set up an animal testing system for
12 looking at respiratory allergy. I had developed such
13 a system in my post-doctoral studies at Pittsburgh,
14 and so I was setting up and troubleshooting a system
15 for them to use for their testing.

16 1988, Duquesne Light Nuclear Group,
17 Incorporated, Shippingport, Pennsylvania. This was a
18 power generating facility that had an indoor air
19 quality problem with their ventilation system where
20 it was contaminated with microorganisms. I
21 determined what the problem was and guided them on
22 solving their problem.

23 Emilcott Associates, Incorporated, Madison,
24 New Jersey, 1989. This was a consulting firm, and
25 they were working in indoor air quality problems, I

1 believe. And if I remember right, I analyzed samples
2 for them as part of one of their investigations of a
3 sick building.

4 1990, State of Iowa, Department of Natural
5 Resources. In this case, I was involved with issues
6 having to do with permitting of facilities and how
7 modeling -- plume dispersion modeling would be used
8 in order to determine compliance with state law.

9 Q. Can I interrupt for one second?

10 A. Yes.

11 Q. Going back to that, when you say you were
12 modeling plume dispersion, could you be more
13 specific? What were you talking about?

14 A. If I said I was modeling plume dispersion,
15 I apologize. I don't think I said that. What I was
16 doing was sitting on an expert panel that was helping
17 the State and the regulated community consider models
18 for plume dispersion modeling of facilities that
19 generated air pollution. And as I recall, the issue
20 was which models that had been developed would be
21 acceptable for permitting purposes. And so I was
22 part of an expert panel that was listening to that
23 and offering guidance on specific issues.

24 Q. Thank you. Please continue.

25 A. Okay. I believe I was at 1990,

1 S.C. Johnson & Sons, Incorporated, Racine, Wisconsin.
2 S.C. Johnson & Sons was concerned with issues of
3 allergy, allergic contact dermatitis specifically,
4 which is a contact allergy that one can attain from
5 certain types of consumer products that might be
6 applied to the skin, such as shampoos, cosmetics, in
7 some cases dermally applied medicine. And they were
8 interested in having a way to test these in mice to
9 determine if perfumes, preservatives or other
10 components would induce toxic effects. And I worked
11 with them to develop a mouse method for testing for
12 allergic contact dermatitis.

13 Allied Products Corporation, Chicago,
14 Illinois, 1990. I'm not certain on this one. I --
15 my recollection is that this may have been an injury
16 of an employee and a workplace evaluation, but I'm
17 not -- I don't recollect that one clearly anymore.

18 Iowa Beef Processors, Incorporated, was a
19 worker injury and consultation on that particular --
20 the circumstances that led to that injury.

21 1991, CNA Insurance Company was also a
22 worker injury case, and I offered some information
23 regarding the toxic properties of the compounds that
24 were under question.

25 Green Environmental Services, Cedar Rapids.

1 My recollection is, this had to do with using
2 railroad ties for landscaping and questions about the
3 properties of some of the materials that are used to
4 coat railroad ties.

5 1995, Habush, Habush, Davis & Rottier,
6 Madison, Wisconsin, is a law firm. And they were
7 representing a firm that supplied hay to a dairy
8 farmer and asked for an opinion with regard to the
9 properties of microbial contaminants and micro-toxins
10 in green feed hay and so forth.

11 1995, Smith, McElwain & Wengart Law
12 Offices, Sioux City. I don't remember this one at
13 all, I'm afraid to say, so I don't remember what that
14 was about.

15 1995, Castrol Industrial of North America.
16 They are a manufacturer of metalworking fluids which
17 are used for processing cast metal into finished
18 products, such as engine blocks and transmissions.
19 And I had done a number of research studies on the
20 health of machinists exposed to metalworking fluids.
21 And I was consulting with them on formulation of some
22 of their products.

23 We've talked briefly about the next entry,
24 '97 to '99.

25 1998, Hoogovens, IJmuiden, The Netherlands.

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1 This was a machining facility, a large machining
2 facility. And they had a concern about machining
3 fluids that they were using in their processing and
4 microbial contaminants, and I spent one day with
5 them, consulting on their concerns.

6 Wausau Insurance, Downers Grove, Illinois,
7 1999. This was a worker injury case or consultation,
8 rather, and I evaluated the toxic properties of the
9 compounds in question.

10 We've addressed the next entry already. D.
11 David Altman Company.

12 2000, Shuttleworth & Ingersoll, P.C., Cedar
13 Rapids.

14 (Pause.)

15 I'm pausing to try to recollect what the
16 issue was there. Oh, yes, I remember. This was a
17 case of a furniture sales store that did some
18 refinishing of wood, and there was a worker with a
19 health concern regarding that.

20 2002, United States Department of Justice
21 and US EPA Air Enforcement Division. This had to do
22 with my laboratory and me performing some analyses of
23 samples taken from large poultry confinement
24 facilities -- or taken in the vicinity of poultry
25 confinement facilities, and these were analyzed for

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1 the airborne microorganisms in their products.

2 2003, Sullivan & Ward, Des Moines, Iowa, is
3 the case that we described, Sherlock Homes versus
4 Margaret Nims.

5 2005, White & Johnson, P.C., concerned an
6 indoor air problem and a dispute between the heating,
7 ventilating and air conditioning company that
8 installed the ventilation system and the homeowners.
9 And that's the complete list.

10 Q. Doctor, it seems to me, from hearing your
11 description of that list and from looking at the
12 publications on your Curriculum Vitae, that a great
13 deal of your work has been focused on airborne
14 exposures and in some cases contact exposures; is
15 that correct?

16 A. My published work, much of it is, indeed,
17 focused on pulmonary or immunotoxicology. However, I
18 teach toxicology at the undergraduate and graduate
19 level, and I teach general environmental health, and
20 I teach environmental epidemiology, a variety of
21 subjects. So I have expertise that is represented
22 more in my teaching that is broader than what is
23 represented in the particular areas where I am
24 currently actively doing research. Within my
25 published record, I have also looked at pesticide

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1 degradation and issues of the way toxic materials
2 behave in the environment.

3 Q. Holding aside what you may teach, I want to
4 focus on your research and on your professional
5 consulting services. Is it fair to say that the vast
6 majority of that has dealt with airborne exposures or
7 contact exposures?

8 MR. ALTMAN: I'll object.

9 Go ahead, Dr. Thorne.

10 A. Looking simply at my publication record,
11 which reflects my research, it spans an array of
12 areas, and the unifying feature is that it has to do
13 with toxic agents in the environment and the way that
14 they induce adverse health effects. I think, put
15 that way, that encompasses the vast majority of the
16 work that I've done.

17 Q. With all due respect, I'm not sure that
18 that actually answers my question, so perhaps I'll
19 put it this way instead.

20 MR. ALTMAN: Objection.

21 Q. Have you --

22 MR. ALTMAN: Objection.

23 Go ahead.

24 Q. Have you published on the subject of
25 exposure to toxic substances through groundwater?

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1 A. I have published on the toxic property of
2 substances that can move through groundwater. Is
3 that your question?

4 Q. It is not.

5 A. Okay.

6 Q. Have you published on -- have you published
7 on the exposure to substances that, in the context of
8 what you were publishing on, were transported through
9 groundwater?

10 MR. ALTMAN: Objection.

11 A. I'm going to look through the papers that
12 are listed and the abstracts and make sure that I
13 answer your question as best I can. There's --
14 recognizing that it covers more than 20 years and
15 more than 200 published abstracts, papers and book
16 chapters.

17 (Pause.)

18 MR. ALTMAN: Marcel, I want to make
19 clear my objection is to the form. I don't
20 understand that question, but if the witness does, he
21 should certainly answer it.

22 MR. DUHAMEL: The witness didn't seem
23 to have any problem understanding the objection --
24 or, rather, the question.

25 MR. ALTMAN: I think the witness

8 (Pages 26 to 29)

<p style="text-align: right;">Page 30</p> <p>1 already answered your question, and I have a problem 2 with the form of your -- also of your next question 3 that you now have, and so I've objected to form. But 4 if the witness does understand what you're saying, he 5 should answer. 6 A. (Pause.) 7 Looking at my record of publications as 8 reflected in Exhibit 2, I see that I have published 9 several papers that cover or consider issues of 10 substances that can move in water. This would 11 include metalworking fluids and their components. It 12 would include arsenic. It would include several 13 other metals, and it would include some pesticides. 14 Q. It appears to me that perhaps we are having 15 a little difficulty communicating, so let me try to 16 narrow the focus of my question. Okay, Doctor? 17 A. Please do. 18 Q. Holding aside your studies of materials 19 that can move through water, have you ever published 20 on the subject of the toxicological properties of 21 substances to which individuals were exposed through 22 contaminated groundwater? 23 A. Yes. 24 MR. ALTMAN: Objection as to the form. 25 Objection as to the form.</p>	<p style="text-align: right;">Page 32</p> <p>1 repeat the question? I guess I should ask you, 2 Mr. Duhamel. 3 Q. That's fine. 4 MR. DUHAMEL: I'll ask the court 5 reporter to -- I'll ask the court reporter to read 6 the question back. 7 (The reporter read the requested 8 portion of the record.) 9 MR. ALTMAN: I continue to object. 10 Go ahead. 11 A. I can think of one additional study that 12 considered, among many other exposures, exposures to 13 contaminated water, and that would be No. 43 on 14 Page 13. 15 Q. Just to try to make sure our list is 16 complete, any others that you can recall? 17 A. So you're not interested in studies of 18 materials to which people are exposed to groundwater, 19 but that were conducted in a laboratory? You're 20 excluding those, correct? 21 Q. Not intentionally. 22 A. Okay. I can point to publication No. 11 on 23 Page 12, which is Lightfoot EN, et al., Laboratory 24 studies on mechanisms for the degradation of 25 aldicarb, aldicarb sulfoxide and aldicarb sulfone,</p>
<p style="text-align: right;">Page 31</p> <p>1 Go ahead. 2 A. Yes. 3 Q. And could you identify those publications 4 for me? 5 A. The publication listed as No. 102. 6 Q. And that is, just to be sure we're correct, 7 Beane Freeman LE, Dennis LK, Lynch CF, Thorne PS, 8 Just CL, Toenail arsenic content and cutaneous 9 melanoma in Iowa? 10 A. Cutaneous, yes. 11 Q. Thank you. 12 And that's correct? 13 A. That's correct. 14 Q. That's the publication to which you were 15 referring? 16 A. Yes. 17 Q. Any others? 18 MR. ALTMAN: Objection to form. 19 A. As I understand the question, it's 20 exceedingly narrow. 21 Q. That is correct. It's a very narrow 22 question, Doctor. 23 THE WITNESS: Can you repeat the 24 question for me? 25 A. Am I allowed to ask the court reporter to</p>	<p style="text-align: right;">Page 33</p> <p>1 1987. 2 Similarly to that would be No. 32 on 3 Page 13, Subramanian, Teesch, Thorne, Degradation of 4 3.5-dimethyl-tetrahydro-2H-1,3,5-thiadiazine-2-thione 5 in aqueous aerobic media. 6 Q. Let me ask, what is aqueous aerobic media? 7 A. That means water-based solutions that have 8 oxygenation or air, and it makes a difference in 9 terms of degradation of compounds. 10 Also, there are studies in the waste 11 handling industry where people are exposed to 12 potentially infectious agents via ingestion. So 13 although that's not groundwater, it's through 14 ingestion of food and water, and, hence, it's not 15 respiratory and it's not percutaneous absorption, 16 which was part of your initial question. 17 Q. That's correct. Could you identify those 18 for me? 19 A. There is a paper, No. 66, on Page 15, 20 Mahar, Reynolds, Thorne, and it's entitled Worker 21 exposures to particulates, endotoxins and bioaerosols 22 in two refuse-derived fuel plants. The title doesn't 23 necessarily reflect this, but we did look at 24 gastrointestinal illness among these particular 25 workers.</p>

1 Then there's a paper now published that is
2 listed on Page 18, and it's No. 6 at the top of the
3 page, and at the time of this, it was a submitted
4 paper. It is now published. And that is Lee,
5 Johnson, Reynolds, Thorne, O'Shaughnessy, entitled
6 Indoor and outdoor air quality assessment of four
7 wastewater treatment plants. And in that there's
8 also ascertainment of gastrointestinal illness as
9 part of the evaluation.

10 As I glance at the list of these
11 publications, those are the ones that come to mind as
12 examples. There may be aspects of some of the other
13 papers as well. For instance, there's also No. 94 on
14 Page 16 that considered women serving in the Gulf
15 War, the first Gulf War -- well, the first U.S. Gulf
16 War and their combat experience exposures and
17 utilization of health care, so that would also
18 consider the water that they ingested.

19 Q. Could you look at Page 51 and 52 of
20 Exhibit 2 and do the same thing you just did with
21 respect to professional consulting and serving as
22 expert witness?

23 A. Can you clarify what you mean by what I
24 just did? I want to make sure I understand you.

25 Q. Sure.

1 Could you identify -- that's fine.

2 Could you identify any of those engagements
3 which involved potential exposure to a substance
4 through either ingestion of or contact with
5 contaminated water?

6 MR. ALTMAN: Objection to the form.
7 Marcel, you have now changed it to potential
8 exposure, and that was not part of your first
9 question. I don't know whether that was intentional
10 or not.

11 A. So you're asking for potential exposure to
12 contaminated water, and any contaminant?

13 Q. Correct, for this list that we're looking
14 at on Page 51 to 52, yes, where you actually
15 considered the effects of potential exposure or
16 actual exposure.

17 A. So 1982 --

18 MR. ALTMAN: I want the record to
19 reflect that that is not the same question that was
20 asked on the earlier list.

21 MR. DUHAMEL: I think the record will
22 reflect whatever it reflects.

23 A. 1982, Union Carbide, that would -- that did
24 consider potential exposures to substances in the
25 water.

1 Kikkoman Foods also -- in this case it was
2 processed water used for manufacturing soy sauce.
3 1983 to '87, Union Carbide, same as what I
4 just -- as the previous Union Carbide that was
5 considering contaminants in water.

6 1988, Duquesne Light Nuclear Group. This
7 was contaminants in water in the cooler condensing
8 units in the ventilation system, but they were
9 waterborne contaminants.

10 S.C. Johnson & Sons. These were
11 contaminants in products that you use in the shower,
12 in some cases, so those would be water, but they
13 were -- exposure to those would mostly be by dermal
14 absorption; although, one can have some ingestion,
15 potentially.

16 Castrol Industrial of North America.
17 Metalworking fluids can be contaminants of water and
18 their products and their process oftentimes in
19 municipal wastewater treatment system which may not
20 adequately remove the contaminants from the water.

21 Q. If I could interrupt you briefly.
22 Specifically, what were you looking at in the
23 engagement involving Castrol Industrial of North
24 America?

25 A. I was -- the nature of that consultation

1 had to do with the formulation of machining fluids.
2 And the formulation includes what chemicals are put
3 into them in their initial formulation as well as
4 additives that are recommended. It also deals with
5 compounds that arise in the use of those metalworking
6 fluids in industrial processes and then the
7 ramifications of the waste treatment and recovery of
8 those machining fluids, because they're very
9 expensive. And oftentimes it is not allowed to have
10 certain contaminants or certain compounds included in
11 those put into the municipal sewer system. I think
12 if I were to go any further than that, it would get
13 into trade secrets with regard to their formulary,
14 and so I can't do that.

15 Q. All right. And that's it on the list, the
16 ones you've already identified?

17 A. Yes.

18 Q. I interrupted you while we were talking
19 about Castrol, and I wanted to make sure there was
20 nothing subsequent to that.

21 A. Well, the list, 1998, Hoogovens, Ijmuiden,
22 that was also machining fluids used in metal
23 processing, so those have the potential to lead to
24 ingestion exposure from water systems.

25 Q. Were you specifically studying that

1 potential exposure and its effects with respect to
2 that particular engagement?

3 MR. ALTMAN: Objection.

4 **A. When a company has a problem with a**
5 **material in a process, oftentimes one doesn't simply**
6 **look at one small aspect of the problem. So I was**
7 **looking at a host of questions that they had**
8 **regarding these materials, their toxic properties and**
9 **how they could deal with cleaning them, reprocessing**
10 **them, reusing them and disposing of them. So it was**
11 **an element of the overall consultation. It wasn't**
12 **the sole aspect of the consultation.**

13 Q. Doctor, let's turn to Exhibit 1. When were
14 you first asked to prepare an expert report in this
15 case?

16 **A. It was early in the fall of 2005.**

17 Q. What specifically were you asked to express
18 an opinion on?

19 **A. I was asked to consider the toxicants that**
20 **were at the Carlisle facility or emanating from the**
21 **Carlisle facility and provide information on their**
22 **toxicologic properties.**

23 Q. Were you asked to do anything else?

24 MR. ALTMAN: Objection to form.

25 **A. I was also asked to identify and define**

1 **what sorts of criteria are used for establishing the**
2 **hazardous nature of compounds, for instance,**
3 **carcinogens. And so I provided the group listings**
4 **from the National Toxicology Program and from the**
5 **International Agency for Research on Cancer and the**
6 **criteria that they use.**

7 **In addition, I provided some information,**
8 **where appropriate, on the degradation products that**
9 **arise from some of the toxicants that I was**
10 **expressing -- providing information about as to their**
11 **toxicity. I also provided some information regarding**
12 **the hazards associated with exposures to mixtures**
13 **rather than individual compounds one at a time,**
14 **because, as I expressed earlier, that's really very**
15 **much of an artificial scenario that one might be**
16 **exposed to a compound one at a time, and so I**
17 **commented on the toxicity of mixtures as well.**

18 Q. Were you asked to do anything else?

19 **A. That's all I recall being asked to do.**

20 Q. We're going to take a momentary break.
21 We've been going for about 90 minutes. We'll
22 reconvene in two or three minutes, if that's okay.

23 **A. It's fine with me.**

24 MR. DUHAMEL: Very good. We're off the
25 record.

1 (A recess was held at 10:31 a.m., and
2 proceedings resumed at 10:37 a.m.)

3 MR. DUHAMEL: Let us go back on the
4 record, please.

5 Q. (BY MR. DUHAMEL) Doctor, I want to make
6 sure that I understand the substance of your expert
7 report, so I'm going to ask a few specific questions
8 about what's contained in it.

9 **A. Very good.**

10 Q. Does your expert report express any opinion
11 as to whether any person has, in fact, been exposed
12 to any toxic substance from the plant located at
13 Carlisle Engineered Products facility?

14 **A. As we discussed before the break, my role**
15 **in this and what I provided an expert opinion on was**
16 **the nature of the toxic properties of those**
17 **compounds. And it's my understanding that there are**
18 **other experts that were retained to provide**
19 **information on hydro-geology and on pathways and**
20 **transport from the facility. And that would be**
21 **Bruce -- Dr. Bruce Bell and Dr. Julie Wetherington-**
22 **Rice, so that was not what I was asked to provide an**
23 **opinion on.**

24 Q. So just to be clear, your report does not
25 express any opinion on that subject?

1 **A. I did not evaluate the transport or the**
2 **fate of compounds from Carlisle, and so that's not a**
3 **part of my report.**

4 Q. Okay. Does your report express an opinion
5 as to whether or not conditions at the Carlisle
6 Engineered Products facility in Middlefield, Ohio,
7 constitute or may constitute an emanate and
8 substantial endangerment to human health or the
9 environment?

10 **A. The array of compounds that are associated**
11 **with the facility and their toxicity and the notion**
12 **that there's the potential for multiple contact with**
13 **multiple agents is -- the full array of compounds is**
14 **such that it is of a concern to me that there are**
15 **unknown or unstudied compounds as to their presence**
16 **on the facility or their movement from the facility.**
17 **So, although I haven't looked specifically or**
18 **addressed in my report specifically the pathways, I**
19 **expressed the concern that given the array of**
20 **compounds that are there and their toxic nature, that**
21 **it is potential to pose imminent substantial**
22 **endangerment.**

23 Q. Can you show me in your report where you
24 reach that particular conclusion?

25 **A. I believe I said that I didn't specifically**

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1 put that in my report. But what I did just state is
2 that, as I look at the list and I consider their
3 toxic effects, there's an array of very toxic to
4 potentially -- or moderately to very toxic compounds
5 present at this site. And I'm concerned that these
6 compounds and their fate has not been apparently
7 addressed in terms of considering the potential to
8 cause harm to the public health.

9 Q. I'm going to try again, because I think
10 maybe we're misunderstanding each other, Doctor.

11 Just to be completely clear, I'm not asking
12 you at all about what your current concerns or
13 opinions may be. What I'm asking you is specifically
14 about what opinions you actually expressed in your
15 report.

16 So my question again is, does your report
17 express any opinion on that subject?

18 **A. I could point you to Page 9 at the bottom,**
19 **Comment on the Toxicity of Mixtures. "The toxic**
20 **profiles of the above compounds represent a synopsis**
21 **of their effects when exposure occurs individually.**
22 **Because of the nature of the chemicals discussed**
23 **herein, it is likely that additive and synergistic**
24 **effects would occur with combined exposures to these**
25 **and other chemicals released from the Carlisle**

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1 **facility. Further, exposures to the chemicals herein**
2 **occurring via multiple routes (i.e., inhalation,**
3 **ingestion, dermal) would likely lead to greater**
4 **toxicity than by one route of exposure for one or**
5 **multiple compounds." So that would be the place**
6 **where I'm referring to this issue of exposure to**
7 **multiple compounds which may have additive or**
8 **synergistic effects.**

9 Q. I understand.

10 Does the -- let me put it this way. Does
11 the phrase "imminent and substantial endangerment"
12 appear anywhere in your report?

13 **A. No.**

14 Q. In Item D where you include Comment on the
15 Toxicity of Mixtures, do you express anywhere in your
16 report any opinion as to the likelihood of actual
17 exposure to -- let me start again.

18 Does your report in any way express an
19 opinion as to how likely it is that any person will
20 be exposed to contaminated groundwater around the
21 Carlisle Engineered Products facility?

22 MR. ALTMAN: Objection.

23 **A. No. My report stands as it is. And as I**
24 **pointed out before, there were other experts,**
25 **Dr. Bell and Dr. Wetherington-Rice, that I understood**

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1 **offered opinions as to those points that you raise.**

2 Q. But your report doesn't raise or does not
3 offer an opinion on that subject?

4 **A. On the subject of transport from the site,**
5 **no.**

6 Q. And on the subject of exposure by any
7 individual or group of individuals?

8 MR. ALTMAN: Objection. That's been
9 asked and answered.

10 MR. DUHAMEL: You know what? It has.
11 I'll withdraw the question.

12 Q. (BY MR. DUHAMEL) Doctor, have you been
13 asked to provide a supplemental expert report?

14 **A. No, I have not.**

15 Q. Did Mr. Altman or any attorney at
16 Mr. Altman's firm send you a written engagement
17 letter?

18 **A. Can you clarify what you mean by "a written**
19 **engagement letter"? That's not a term that is**
20 **familiar to me.**

21 Q. All right. Let's put it this way. When
22 you were first asked to serve as an expert in this
23 case, were you asked orally or in writing?

24 **A. Orally.**

25 Q. Did Mr. Altman or any attorney in his firm

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1 ever send you a letter, indicating what they had
2 asked you to provide an expert opinion on?

3 **A. That was done orally.**

4 Q. Did Mr. Altman or anyone in his firm ever
5 ask you if you could provide an opinion on the
6 subject of imminent and substantial endangerment?

7 **A. You mean as a part of the report?**

8 Q. Yes, sir.

9 **A. No.**

10 Q. Okay. Can we just turn to Page 2 of your
11 report, the substitute page?

12 **A. (Witness complied.)**

13 Q. Looking at the very first substance that
14 you address, trichloroethylene, do you see that?

15 **A. Yes.**

16 Q. There is a reference to the EPA having
17 established an MCL in drinking water. Do you see
18 that?

19 **A. Yes.**

20 Q. What's an MCL?

21 **A. It's a maximum contaminant level.**

22 Q. Do you know what the purpose of an MCL is?

23 **A. Yes. An MCL provides a benchmark by which**
24 **we judge when there's excessive contamination of the**
25 **medium, the water, from the standpoint of what's safe**

12 (Pages 42 to 45)

1 **for the public.**

2 Q. Do you know if the EPA has ever determined
3 that exposure to trichloroethylene in drinking water
4 in an amount greater than five parts per billion is
5 actually unsafe?

6 **A. The establishment of health-based standards**
7 **consider an array of aspects of a risk assessment**
8 **process. They consider the toxicity of the compound.**
9 **In some cases, they consider other potential**
10 **compounds that might be -- one might face exposure**
11 **along with that compound. They use animal data,**
12 **human data. They draw from an array of sources of**
13 **information to determine a level that would provide**
14 **an ample protection of the public for the particular**
15 **substance that is being -- for which the MCL is being**
16 **established.**

17 Q. Would you agree with me that that does not
18 necessarily mean that the EPA has determined that an
19 actual exposure at, say, six parts per billion is, in
20 fact, unsafe, but merely that, instead --

21 MR. ALTMAN: Objection.

22 Q. -- instead, as a matter of policy, the EPA
23 will set screening limits of five parts per billion?

24 MR. ALTMAN: Objection as to form and
25 substance.

1 **A. Standard setting is a process of evaluating**
2 **the risks of a particular compound or suite of**
3 **compounds and trying to identify a reasonable level**
4 **that will protect the public, and when you're talking**
5 **about protecting the public, it means the majority of**
6 **the public. And so one has to recognize that there**
7 **might be individuals within the public who are more**
8 **susceptible by virtue of genetics, age, gender, other**
9 **exposures that they have concurrently, personal**
10 **lifestyle factors and the like. And so these**
11 **standards provide that consideration, to provide an**
12 **overall measure of public health protection. So**
13 **these don't derive solely from a dose response type**
14 **of argument in a selected subgroup of the population.**

15 Q. Your next sentence, "The NTP has stated
16 that trichloroethylene is Group 2A, reasonably
17 anticipated to be a human carcinogen," do you see
18 that?

19 **A. Yes.**

20 Q. Is there a specific dose over a specific
21 period of time at which the NTP has made that
22 determination?

23 **A. Generally, when the NTP or IARC, the**
24 **International Agency for Research on Cancer, makes a**
25 **determination as to which category or group of**

1 **carcinogenicity they put a compound into, they**
2 **consider a weight of evidence of all of the data that**
3 **are available, deriving from occupational health**
4 **studies, epidemiologic studies, community health**
5 **studies, animal studies, in some cases, cell culture**
6 **or mechanistic laboratory studies, and so they look**
7 **at all of that information and make a determination**
8 **as to whether the compound is a Group 1, a 2A, a 2B**
9 **and so forth.**

10 Q. Respectfully, I don't think that answered
11 my question.

12 When the NTP determines that a substance is
13 reasonably anticipated to be a human carcinogen, is
14 the NTP expressing a statement about what level of
15 exposure to that substance is likely to result in the
16 development of cancer in human populations?

17 MR. ALTMAN: Objection.

18 **A. The NTP publishes a list of agents that**
19 **they have evaluated and as to their grouping, so**
20 **those that are known to be a human carcinogen or**
21 **reasonably anticipated to be carcinogenic become**
22 **listed compounds. And when they are listed**
23 **compounds, then they have that designation, and it**
24 **is not -- a level for that is not set in the list.**
25 **That's their process.**

1 Q. Understand.

2 Do you express anywhere in your report
3 any opinion as to what level of exposure to
4 trichloroethylene is likely to result in the
5 development of cancer in a human population?

6 MR. ALTMAN: Objection.

7 **A. I have not done so, because these**
8 **compounds, typically one is not exposed to them one**
9 **at a time. Rather, it's as a mixture. And,**
10 **furthermore, it's not a one size fits all in terms of**
11 **the individual that is being exposed. As I've stated**
12 **several times, there are susceptibility factors which**
13 **then determine, in effect, the toxicity of these**
14 **compounds or the effects that they're going to exert**
15 **on an individual. So given the array of compounds**
16 **that we're considering, it's -- I don't feel that**
17 **it's particularly meaningful to look at an individual**
18 **compound and say something about, if you will, a dose**
19 **response for that individual compound.**

20 Q. All right. Well, let's try it, then, with
21 the entire array of compounds which, if I understand
22 correctly, you address as a mixture only in Item D on
23 Page 9 of your report; is that correct?

24 **A. No.**

25 MR. ALTMAN: Objection.

1 THE WITNESS: Sorry.
2 Q. (BY MR. DUHAMEL) Where else do you express
3 an opinion on the effect of these items as a mixture?

4 **A. What I was about to say before the**
5 **objection, throughout here, there is a consideration**
6 **of mixtures that in many cases there are statements**
7 **as the environmental degradation products of the**
8 **particular compound that's being described. And,**
9 **hence, if there's degradation from the parent**
10 **compound to first one intermediate then another, then**
11 **another, clearly there would be exposure to that**
12 **suite of compounds in the environment, and so those**
13 **statements appear throughout the report.**

14 Q. Let's try it this way. Does your report
15 address -- I'm sorry. Does your report express any
16 opinion on the dose or amount of exposure to the
17 suite of substances you address that would be likely
18 to result in harm to human health?

19 **A. I'm sorry. Can you restate or rephrase the**
20 **question for me, because I don't understand the**
21 **question?**

22 Q. All right. Taking the entire suite of
23 exposure -- of substances --

24 **A. So by that, you mean all 23 compounds that**
25 **I've rendered information on?**

1 Q. Absolutely.

2 **A. Okay.**

3 Q. Take all 23 of them.

4 **A. And their degradation products that I've**
5 **mentioned?**

6 Q. Absolutely.

7 **A. Okay.**

8 Q. Take all of them.

9 **A. Yes.**

10 Q. And consider it a mixture. Does your
11 report express any condition as to what dose of
12 exposure to that mixture would be likely to result in
13 harm to human health?

14 MR. ALTMAN: Objection.

15 **A. The compounds in this report, some of them**
16 **appear in water; some of them might be carried in**
17 **windblown soil; some of them may be off-gassing from**
18 **soil, so there would be multiple routes of --**
19 **potentially multiple routes of exposure and**
20 **differences in terms of temporal and spacial**
21 **characteristics of the exposures. So I would venture**
22 **to guess that it would be unlikely that one -- that**
23 **people living in different areas around the facility**
24 **could have exposure to exactly the same suite of**
25 **these mixtures. So, therefore, it would not be**

1 **fruitful to try and identify a dose for each of these**
2 **together that would yield some sort of a hypothetical**
3 **outcome.**

4 Q. Does your report express any opinion as to
5 the nature of any actual exposure to any of these
6 substances, separately or in combination with others,
7 that people are actually experiencing or are likely
8 to actually experience around the Carlisle Engineered
9 Products facility?

10 MR. ALTMAN: Objection.

11 **A. Throughout the report, it refers to the**
12 **haz- -- some of the hazardous effects that are**
13 **associated with these particular compounds, adverse**
14 **health effects that occur in community-exposed**
15 **individuals and occupationally-exposed individuals.**
16 **And because the nature of the exposures to those**
17 **living in the vicinity of the Carlisle facility**
18 **aren't fully understood, then it wouldn't be**
19 **appropriate for me to try to express an opinion with**
20 **regard to individuals or their exposures.**

21 Q. When you say the exposures are not -- are
22 not fully understood, could you tell me what you mean
23 by that statement?

24 **A. Yes. There is -- there is evidence that**
25 **has -- or there is information in other reports**

1 **submitted as part of this case that suggest off site**
2 **transmission via groundwater, via air, via surface**
3 **water, via soil and -- however, my understanding is**
4 **that these have not been studied sufficiently in**
5 **order to establish clearly the exposures that are**
6 **occurring to those who live in the vicinity of the**
7 **Carlisle facility.**

8 Q. And your report does not address that issue
9 directly; is that correct?

10 **A. Well, my report, as I've said, articulates**
11 **with regard to the adverse health effects associated**
12 **with these compounds and occupational and community**
13 **health settings, and so that's clearly relevant to**
14 **the exposures that the people living in the vicinity**
15 **of the Carlisle facility would experience and,**
16 **therefore, the adverse health effects articulated,**
17 **that they may be at risk for those adverse health**
18 **outcomes.**

19 Q. I don't think that's what I asked you,
20 Doctor. Let's try it again.

21 **A. Okay.**

22 MR. ALTMAN: Objection, argumentative.
23 Objection, argumentative.

24 Q. If I understood correctly, you told me that
25 there were some suggestions in some of the other

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1 reports rendered by some of the other experts in the
2 case that there were some potential exposure
3 pathways, but that those exposure pathways have not
4 yet been sufficiently studied to determine whether
5 and to what extent people in the vicinity were being
6 exposed. Is that correct?

7 MR. ALTMAN: Objection,
8 mischaracterizes the testimony.

9 MR. DUHAMEL: Well, I'm asking him if
10 it's right.

11 MR. ALTMAN: I'm objecting to what
12 your -- to your question. It mischaracterizes the
13 testimony.

14 **A. So is there a question?**

15 Q. There is.

16 MR. DUHAMEL: Would the court reporter
17 read it back, please?

18 (The reporter read the requested
19 portion of the record.)

20 MR. ALTMAN: I'm going to have an
21 objection as to form and as to the
22 mischaracterization.

23 Go ahead, Doctor.

24 **A. So, there are other reports that speak to**
25 **what is known about the movement of materials and the**

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1 **concentrations on site. There's less information, as**
2 **I understand it, with regard to what is off site, but**
3 **there are -- the pathways are evident that there**
4 **is -- such that there would be exposure to the**
5 **materials from materials from the Carlisle facility**
6 **to those who live in the neighboring vicinity.**

7 Q. (BY MR. DUHAMEL) Does your report -- I'm
8 talking about your expert report -- address the
9 likelihood of actual exposure to any of these
10 products or substances that might be experienced by
11 anyone within the vicinity of Carlisle Engineered
12 Products?

13 **A. The list of compounds comes from**
14 **materials -- lists of materials from the facility**
15 **that were -- that were used there. They were**
16 **supplied to the facility. They were in the waste**
17 **streams from the facility. Therefore, given that**
18 **they were in use on the facility, there's the**
19 **potential for them to cause exposure off site and**
20 **then -- so that extent, that is -- that is an element**
21 **of my report, yes.**

22 Q. Could you show me where your report says
23 that?

24 **A. On Page 10, on the listing of information**
25 **considered in forming my opinion, there's No. 30,**

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1 **No. 31, No. 32, No. 33 on Page 11.**

2 Q. That's the information that you considered.
3 Is there anywhere in your report where you expressed
4 the opinion that people are likely to be exposed to
5 any of the substances that you've identified in the
6 report? I'm not asking about what other people may
7 or may not have said. I'm asking, is there anyone in
8 your -- anywhere in your report where you express
9 that opinion?

10 **A. Well, I guess, to that I would say --**

11 MR. ALTMAN: Objection.

12 Peter --

13 THE WITNESS: YES.

14 MR. ALTMAN: Objection. I think that's
15 been asked and answered.

16 Go ahead.

17 **A. I would say that it's implicit in the**
18 **report, because, obviously, these compounds that**
19 **I've -- that I've described the toxicity of in my**
20 **report were not picked out of -- at random. They**
21 **were picked because they were compounds that evidence**
22 **suggests were on site, and there's -- and were either**
23 **in the waste stream, the supply stream or were**
24 **identified in sampling. So the fact that these are**
25 **the ones that were selected as opposed to some other**

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1 random compound is because there was the potential
2 for exposure to these. So it's the nature of the
3 report. It's inherent in the report that those are
4 there for that reason, and, thus, it isn't something
5 that one would expect to explicitly state.

6 I mean, it says, The facts and opinions
7 about waste handling, storage, disposal practices,
8 fate and effects are provided by other reports. This
9 summarizes the properties of certain chemicals used
10 by and/or released from the Carlisle facility. So
11 that sentence demonstrates that these are picked
12 because they have the potential -- that they were
13 used by and have the potential for release or were
14 released from the Carlisle facility. So I think the
15 answer to your question is, yes, if I understand your
16 question.

17 (A discussion was held off the record.)

18 Q. (BY MR. DUHAMEL) Doctor, had you read any
19 other expert reports at the time you prepared this
20 report?

21 MR. ALTMAN: Objection.

22 **A. You said "have I"? Do you mean "had I"?**

23 Q. Had, had, H-A-D.

24 **A. Yes. Thank you. Had I --**

25 Q. At the time you prepared this report.

15 (Pages 54 to 57)

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A. I don't believe I had. I do not recollect having read any other report at the time I did this.

Q. And I notice that in Item 2, Information Considered in Forming My Opinion, none of those expert reports submitted by the Plaintiffs is listed; is that correct?

A. So there are two reports listed on Page 2 under No. 2, and they do not appear in the list on Pages 10 and 11.

Q. That's what I'm asking, and that's correct, right? They do not appear on the list on Page 11 --

A. Yes, that's what I stated.

Q. -- Pages 10 and 11?

Okay. Doctor, at the time you prepared your report, had you spoken to anyone at Bennett & Williams Environmental Consultants?

A. No.

Q. At the time you prepared your report, had you spoken to anyone at Carpenter Environmental Associates?

A. No.

Q. Who supplied to you the list of substances that you evaluated in your report?

A. This -- these compounds were on a list provided to me by Mr. Altman and his associates.

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Q. Have you -- let me rephrase.

Does your report contain any independent assessment by you of the likelihood of exposure to these substances by anyone around the Carlisle Engineered Products facility?

MR. ALTMAN: Objection.

A. I believe that that's been -- that you asked me that already, and I've answered that. This refers to -- that the compounds are here because they are used by or released from the Carlisle facility, and that's what puts them on the list. Therefore, there's the potential --

Q. I remember you said that.

A. -- for exposure.

Q. But what I'm asking you is whether you independently have performed any actual assessment of the likelihood of actual exposure to these products or substances based on the way that they are currently in existence at the facility?

MR. ALTMAN: Objection.

A. Well, first of all, this report is not -- doesn't reflect what's currently there, because this report came some time ago, as you know. And in addition, the report is based on the information of -- that reflects the use of the materials at the

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facility and, therefore, having the potential to lead to exposures to individuals who live in the facility -- vicinity of the facility, so to that extent, the answer would be yes.

Q. All right. Let's try it this way. Other than the fact that somebody told you that these products, at least at some time, had been used at the facility, do you have any reason to believe, that is expressed in your report, that anyone is likely to be exposed to these products around the Carlisle Engineered Products facility?

MR. ALTMAN: Objection.

A. The items I pointed to earlier, the letters and attachments between and to people at Carlisle demonstrate that there was use of these materials and in some cases demonstrates that there was exposure on site, so the answer to your question would be yes.

Q. Other than the fact that some of the items on which you relied say that, does anywhere in your report express an opinion on that subject?

MR. ALTMAN: Objection. This is boarding on argumentative.

A. As I stated, the -- what I was asked to do and my role as an expert was to provide information on the toxic properties of the compounds used by or

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found at the site. And there were other experts offering opinions on fate and transport and hydro-geology and movement of the compounds, so, you know, I did just that. And the compounds that I list -- I talked about in the report or gave information about in the report are in the report because they were used at the facility and referred to in various documents that are referenced therein.

MR. DUHAMEL: Could the court reporter read my question back? And I'll ask the witness to actually answer it.

MR. ALTMAN: Objection. Marcel, we're going to at least take a break if you continue to argue with the witness.

MR. DUHAMEL: Well, we can take a break after the witness answers my question.

MR. ALTMAN: No. What I meant was, we may terminate the deposition if you continue to badger the witness.

MR. DUHAMEL: I'll ask my questions.

MR. ALTMAN: Well, you're not going to intimidate the witness.

MR. DUHAMEL: I'm quite confident that Dr. Thorne is not going to be intimidated by me. However, I will ask my questions until they're

16 (Pages 58 to 61)

1 answered.

2 THE WITNESS: And I'm doing the best to
3 answer the questions that you're posing to me, I can
4 assure you.

5 MR. ALTMAN: Marcel, that's
6 disrespectful and uncivil. And if you contrast the
7 honest way this man's been answering with the people
8 that have been put in front of me, it will be
9 astounding.

10 MR. DUHAMEL: I'm not going to engage
11 in that on this transcript, but --

12 MR. ALTMAN: Well, you're not going to
13 insult Dr. Thorne, who is an honest and straight-
14 forward man.

15 MR. DUHAMEL: Nor have I suggested to
16 the contrary. I'm going to ask the witness -- or,
17 rather, the court reporter to go back and re-read the
18 question?

19 MR. ALTMAN: Marcel, I have a high
20 regard for you, but your questions have been almost
21 incomprehensible.

22 (The reporter read the requested
23 portion of the record.)

24 **A. So there's two "that's" in the question**
25 **that I'm not certain what they mean at this point, so**

1 **if you could rephrase your question or ask it again**
2 **in a more specific manner, I'd be happy to answer it.**

3 Q. (BY MR. DUHAMEL) All right. Let's try it
4 this way, Doctor. I understand that you have told me
5 that some of the items upon which you relied in
6 formulating your report express the view that these
7 substances that are the subject of your report were
8 used at the facility. Is that understanding correct?

9 **A. Yes.**

10 Q. I also understood from your testimony --
11 and please tell me if this is correct or a
12 mischaracterization -- that to the extent to which
13 you believe that people might be exposed to any of
14 those products or substances, it is because you know
15 them to have been used at the Carlisle Engineered
16 Products facility; is that correct?

17 MR. ALTMAN: Objection as to form and
18 substance.

19 **A. So you're asking, at the time I wrote the**
20 **report and the information I had in my knowledge at**
21 **that time contrasted with what I know today?**

22 Q. Yes. Absolutely.

23 **A. Okay. So at the time I wrote my report, I**
24 **knew of the listed compounds. I knew of the letters**
25 **that I've referred to several times. I also knew**

1 **that there had been some soil sampling performed that**
2 **showed that there were compounds that are on --**
3 **contained within my report appearing at levels that**
4 **would not be expected in normal samples or**
5 **non-contaminated samples, so that was also a piece of**
6 **information that was part of my knowledge at the time**
7 **that I wrote this report.**

8 **Now, those were -- that's the best of my**
9 **recollection with regard to what I knew at that time**
10 **with regard to this case. And, of course, this has**
11 **been a continuum. The report was -- the report**
12 **authoring was at one time point along this continuum**
13 **of learning more of this particular case, but to the**
14 **best of my recollection, that's what I knew at that**
15 **time.**

16 Q. All right. Then apart from listing the
17 sources of information on which you relied, does your
18 actual expert report -- as distinct from whatever
19 opinion you may currently hold, does your actual
20 expert report express any opinion as to the
21 likelihood of actual exposure to any of the
22 substances at or around the Carlisle Engineered
23 Products facility?

24 **A. Well, I would --**

25 MR. ALTMAN: Objection.

1 **A. I'm sorry. I have to go back to the same**
2 **answer I've given multiple times, which is that these**
3 **compounds were used and -- in the waste products**
4 **streams from the facility and they -- these**
5 **compounds, by their very nature, have the potential**
6 **to move in the environment. And so with that**
7 **knowledge, one has to consider the possibility that**
8 **people in the vicinity of the facility would have**
9 **exposure. And looking at the transmissions and the**
10 **correspondence in these particular letters that I've**
11 **pointed to, it's reasonable to consider that that**
12 **would be a possibility. So, I guess, it's a**
13 **qualified yes to your question as stated.**

14 Q. And what I'm specifically trying to
15 understand, Doctor, is not what opinion you have
16 right now. Where in your report does it express that
17 view?

18 MR. ALTMAN: Objection.

19 **A. So I would point again to my comments under**
20 **Section D that we've talked about, and then I**
21 **would -- I would point to the fact that this --**
22 **Page 2 under No. 2, that the report summarizes the**
23 **toxic properties of chemicals used by and/or released**
24 **from the Carlisle facility. So those are the places**
25 **where I refer to that.**

1 Q. Nowhere else?

2 **A. And then as I stated, it's implicit in the**
3 **inclusion of these particular compounds on the list.**
4 **They wouldn't be on the list if there wasn't a reason**
5 **for it.**

6 Q. All right. Is the list of the chemicals
7 that was supplied to you by someone at Mr. Hodgins'
8 (sic) law firm, is that identified on Item 2 on
9 Page 10?

10 **A. When we -- when you asked me about**
11 **getting -- the inclusion of compounds, I believe I**
12 **told you that some of the compounds were on a list,**
13 **and I also point to compounds that were contained in**
14 **these letters that I've referred to from the -- that**
15 **represent company documents, so there isn't a list,**
16 **per se. There was some compounds that were of**
17 **interest to Mr. Hodgins' firm, and then there were**
18 **compounds that were referred to in these particular**
19 **letters and correspondences. And so all of that**
20 **together became sort of a precursor to the compounds**
21 **that are actually listed here, which is a subset of**
22 **those other listings of compounds; both those that I**
23 **came up with and those of others -- of the law firm,**
24 **so there isn't a --**

25 Q. But I understand there was a list --

1 MR. ALTMAN: Objection. Marcel, let
2 him finish.

3 MR. DUHAMEL: I was trying.

4 MR. ALTMAN: Go ahead and finish,
5 Peter.

6 **A. Okay. This -- so what's represented here**
7 **is the list of compounds in my report. There is no**
8 **other list of compounds in my report other than what**
9 **you see before you in Exhibit 1. Now, there was a**
10 **more extensive list of an array of compounds that I**
11 **considered in -- to include in my report, and that**
12 **was drawn from my own investigations with regard to**
13 **looking at these documents I've referred to as well**
14 **as compounds that were of interest to Mr. Altman**
15 **based on his review of company documents. Those --**
16 **in some cases, there were duplication between the**
17 **various sources of information. All of that, then, I**
18 **took and came up with a list that is what you see in**
19 **the report here. That is the list that is reported**
20 **on.**

21 Q. (BY MR. DUHAMEL) Doctor, it is true, isn't
22 it, that someone at Mr. Altman's law firm sent you a
23 list of substances in which they were interested?

24 **A. Yes.**

25 MR. ALTMAN: Objection.

1 Q. Does that list appear anywhere on your
2 report as an item on which you relied in any way?

3 **A. Well, first of all, I mean, there was not**
4 **a list, per se. What there was in our correspondence**
5 **was some compounds of interest, in some cases**
6 **compounds that have alternative names, alternative**
7 **spellings, and then that was some compounds that**
8 **Mr. Altman's firm apparently had decided were of**
9 **interest to them. Many of those were also compounds**
10 **identified in my viewing of the documents that I've**
11 **referenced in my list, and so it's a host of**
12 **different compounds deriving from different sources.**

13 Q. Doctor, did the list or any listing that
14 Mr. Altman's law firm sent to you appear anywhere on
15 your report as an item on which you relied in any
16 way?

17 MR. ALTMAN: Objection.

18 **A. I have not listed in the listing of sources**
19 **information considered in forming my opinion. I have**
20 **not listed a list of candidate compounds or compounds**
21 **of interest to Mr. Altman among that list, so, no, it**
22 **isn't listed in information considered in forming my**
23 **opinion.**

24 Q. Are any of the substances which you
25 addressed in your opinion -- in your report

1 substances you addressed because Mr. Altman asked you
2 to do so?

3 **A. I don't know the answer to that, because I**
4 **would have to look specifically at which compounds**
5 **derived from what sources, which letters and so**
6 **forth, and that's not something that I have**
7 **endeavored to do.**

8 Q. So if I understand correctly, sitting here
9 today, you would not be able to go through your
10 report and identify the substances that you studied
11 because you saw through documentation that they were
12 being used at the plant as distinct from documents or
13 substances that you studied because Mr. Altman's firm
14 asked you to study them?

15 MR. ALTMAN: Objection. There's been
16 testimony on that. That's misleading, inaccurate,
17 and I object to the form.

18 **A. Sitting here right now, I do not know which**
19 **compound came from which source, the letters and**
20 **attachments, the correspondence, and which, if any,**
21 **were on -- were suggested as compounds to be**
22 **considered by Mr. Altman.**

23 Q. Do you still possess correspondence from
24 Mr. Altman, indicating which compounds they would
25 like you to look at?

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1 **A. I don't believe so.**

2 Q. When did you dispose of that?

3 **A. I don't know. Generally, when I create a**
 4 **report such as this, notes such as, you know,**
 5 **candidate substances to consider are something I**
 6 **don't keep.**

7 Q. So would there be any way to reconstruct
 8 the source of your information with respect to any of
 9 the substances on your report?

10 **A. I believe there would be, and that would be**
 11 **to see -- to look through carefully the letters and**
 12 **attachments that are referred to in the list of**
 13 **information considered in forming my opinion and then**
 14 **to endeavor to determine if there are any compounds**
 15 **that I've provided in my report -- included in my**
 16 **report that were not in any of those documents. So**
 17 **it would be something that would be done by**
 18 **exclusion.**

19 Q. And what would we be able to determine by
 20 that process of exclusion? In other words, if we
 21 were to look at the items on Page 10 and determine
 22 what substances exist on that -- on those documents
 23 and then determine that your report addressed
 24 additional substances, what would that tell us about
 25 the source of your information concerning those

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1 additional substances?

2 MR. ALTMAN: Objection.

3 **A. I would -- I would think that that would**
 4 **indicate that those compounds were included as an**
 5 **outgrowth of my discussions with Mr. Altman's --**
 6 **Mr. Altman and his associates.**

7 Q. Other than your expert report and the items
 8 listed on Page 10, moving on to Page 11, do you have
 9 any other documents in your possession that relate to
 10 this engagement?

11 **A. I have an interim accounting of my time**
 12 **spent on the case and a bill that I submitted to**
 13 **Mr. Altman's firm.**

14 Q. Anything else?

15 **A. You say in relation to the engagement. As**
 16 **I understand what you're asking, that would be all.**

17 Q. Well, let's be clear. When I say --

18 MR. ALTMAN: Wait a minute. Marcel,
 19 why don't you explain to him what you mean by -- you
 20 mean in connection with the services he performed,
 21 right, so far?

22 MR. DUHAMEL: Yes. I was attempting to
 23 do that, David.

24 MR. ALTMAN: Go ahead.

25 Q. (BY MR. DUHAMEL) All right. Let's be

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1 clear. When I say "engagement," I mean -- I don't
 2 mean the specific terms of your engagement. I mean
 3 the services you rendered. Do you have any documents
 4 related to the performance of your expert services in
 5 this case?

6 **A. Yes. And now you're talking about --**

7 Q. Other than the ones you just described?

8 **A. Yes. You're talking about now, correct,**
 9 **meaning at this point in time as opposed to when the**
 10 **report was written?**

11 Q. I'm talking about at the time the report
 12 was written. Let me give you a few examples of what
 13 I'm asking about. We'll try it this way.

14 **A. Okay.**

15 Q. Do you have any notes reflecting any of
 16 your work that ultimately led to your report?

17 **A. At the time of my report?**

18 Q. Well, I'm talking about work that led to
 19 your report, so presumably if you have notes that
 20 were generated after, they couldn't have led to your
 21 report.

22 **A. Correct. But I may have had notes at the**
 23 **time I wrote my report that I no longer have.**

24 Q. Okay. That's a fair question.

25 Were there at any time documents related to

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1 this engagement that you had that you no longer have?

2 **A. Yes.**

3 Q. What documents were those?

4 **A. Those would be notes that I make along the**
 5 **way with regard to reading the scientific and**
 6 **toxicologic literature, notes that I make that are**
 7 **relevant to the generation of the report.**

8 Q. Would there be anything else?

9 **A. There would have been -- I probably would**
 10 **have at that time notes regarding -- that I would**
 11 **take in conversations with Mr. Altman regarding**
 12 **the -- you know, the report in terms of what he was**
 13 **asking me to investigate in terms of, you know,**
 14 **providing an opinion as to the toxic com- -- nature**
 15 **of the compounds that I was investigating.**

16 Q. Do any of those notes still exist?

17 **A. I don't know. I would have to check.**

18 Q. How about correspondence exchanged between
 19 you and Mr. Altman's law firm?

20 **A. There -- again, you're referring to at the**
 21 **time I wrote the report, not now, correct?**

22 Q. What I'm referring to is, were there
 23 documents that you exchanged between yourself and
 24 Mr. Altman's law firm or vice versa as of the time
 25 you wrote your report or prior?

19 (Pages 70 to 73)

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A. Yes. Those listed under Nos. 30, 31, 32, 33 in the report, and there would probably be a -- or possibly be a cover letter saying, "Please find herein" da, ta, da, ta, da.

Q. Would Mr. Altman's law firm have sent you any other correspondence?

A. Possibly correspondence to schedule a telephone discussion that would come -- the type that would be arranged through a secretary.

Q. Any other kind of correspondence?

A. Not that comes to mind.

Q. I want to ask you now about what you currently have in your possession.

A. Okay.

Q. Other than the expert report, the interim time record that you mentioned and the items listed on Pages 10 to 11 of the report itself, do you have any other documents related to the work that you performed for the Plaintiff in this case?

A. Yes. I -- would you like me to list them?

Q. Could you tell me what those documents are?

A. Yes.

Q. Yes, please.

A. I have the report of Dr. Bruce Bell; although, I don't -- I'm not certain I have all of

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the appendices with that. For instance, I don't believe I have his CV. Similarly, I have the report of Julie Wetherington-Rice. I have the report of Dr. Richard Lewis. I have part of a summary area investigation that I believe is from a firm called Cox & Colvin. I have a transcript of the deposition of Dr. Lewis. I have some notes I've taken and perhaps some toxicologic profiles from the ATSDR, Agency for Toxic Substances and Disease Registry, that are drawn from their -- they post those on their Internet site. And then if I've done reading in toxicologic texts that are referenced, for instance, the Casarett and Doull toxicology book, I believe, I have some notes that I recorded when reading from that text.

Q. Are those all things that came into your possession after the time you produced your expert report in this case?

A. Yes.

MR. DUHAMEL: Okay. It's a quarter to 1:00. I propose we take a five-minute break. I'm going to review my notes. I think we are nearing completion.

THE WITNESS: Okay.

MR. DUHAMEL: Let's just take five

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minutes and go off the record.

(A recess was held at 11:46 a.m., and proceedings resumed at 12:03 p.m.)

(Thorne Exhibit No. 3 was marked for identification.)

MR. DUHAMEL: Let's go back on the record.

Q. (BY MR. DUHAMEL) Doctor, the court reporter has handed you what's been marked Exhibit 3. I have a couple of questions about it. First of all, have you ever seen a copy of this letter before today?

A. No.

Q. Do you know who Amy Leonard is?

A. Yes.

Q. Have you spoken to Ms. Leonard in the past?

A. Yes.

Q. If you look at the fourth sentence of the letter, it states, and I'll read it, "Also, please note that in addition to the enclosed materials, we did provide Peter Thorne with the names of the individual chemicals which he discusses in his report." Do you see that sentence?

A. Yes.

Q. As far as you know, is it accurate?

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A. I can't be certain it's completely -- that it's completely accurate in that the word "the names" or the words "the names," it could potentially be "some of the names." And as I referred earlier, I can't be sure that -- I'm not certain, as I sit here, that the compounds I opined over in my report were all on a list provided to me by Mr. Altman's firm, because as I stated previously, I did look at these other correspondences, and those certainly list compounds that were in the waste streams and that were supplied or used at Carlisle. And so the compounds that I provided information on were drawn from the multiple sources that I previously suggested. I would guess that they're also provided on the EPA Web site that is referenced in the next sentence of this letter from Amy Leonard.

Q. That what is provided on that Web site, the chemicals that were used at Carlisle's facility?

A. No, no. That information --

MR. ALTMAN: Objection, argumentative.

A. Information about the chemicals is on that Web site, not specifically which chemicals are used at the Carlisle facility. I'm sorry if I misformulated that.

Q. I don't know that you did. I may have

20 (Pages 74 to 77)

1 simply misunderstood.

2 Okay. To the extent to which any of the
3 substances you considered were substances that you
4 looked at because Mr. Altman's law firm provided
5 their names to you and not because you saw them in
6 any of the other documentation to which you've
7 referred, do you know where Mr. Altman's law firm got
8 those substances to provide to you, the list of those
9 substances to provide to you?

10 MR. ALTMAN: Objection. I don't think
11 that's been his testimony at all.

12 **A. I would say that I would have to surmise as**
13 **to what sources they might use, but I have no real**
14 **knowledge of the extent of the information they had**
15 **before them, so I guess the best answer is, I really**
16 **don't know.**

17 Q. Okay. At the time you prepared your
18 report, had you seen or relied on groundwater
19 sampling data around the Carlisle Engineered Products
20 facility?

21 **A. (Pause.)**

22 **I was aware that there was concern with**
23 **regard to groundwater at the property in the vicinity**
24 **of the property, so I knew that that was an issue of**
25 **concern in the case at that time.**

1 Q. What I meant to ask, if I wasn't clear,
2 was, did you see or rely on groundwater sampling data
3 at the time you had prepared your report?

4 **A. No. I had not seen groundwater sampling**
5 **data at the time of my report.**

6 Q. At the time you prepared your report, did
7 you know in what concentrations any of the substances
8 that you were addressing in your report were present
9 in groundwater around the Carlisle Engineered
10 Products facility?

11 **A. I don't believe I did.**

12 Q. Doctor, in preparing for the deposition
13 today, did you look at or review any documents?

14 **A. Yes.**

15 Q. What documents did you review?

16 **A. I reviewed my report, and I reviewed my**
17 **Curriculum Vitae to determine that it was -- to see**
18 **what -- where it was at the time of the report in**
19 **terms of which publications had come out and which**
20 **had not. I reviewed very briefly the report of Bruce**
21 **Bell and the report of Julie Wetherington-Rice, and**
22 **then I also reviewed some recent information I had**
23 **considered with regard to vinyl chloride and its**
24 **toxicity, its carcinogenicity, autoimmune toxicity**
25 **and the fact that it is a degradation product of some**

1 **of the compounds described in my report. I also**
2 **looked up the MCL for vinyl chloride. And with**
3 **regard to TCE, I looked at information on the half**
4 **life of TCE in groundwater to determine what is the**
5 **range of half lives that we know about for aerobic,**
6 **anaerobic groundwater, and I think that that's the**
7 **extent of it.**

8 Q. You said you had done some recent work on
9 vinyl chloride?

10 **A. Yes. Well, recent, yeah, consideration of**
11 **it in the literature, if that's what you mean by**
12 **"work."**

13 Q. When did you -- yes. When did you
14 undertake that?

15 **A. Yesterday and possibly a little the day**
16 **before.**

17 Q. You also looked at some materials
18 concerning the half life of TCE in groundwater; is
19 that correct?

20 **A. Yes.**

21 Q. And when did you look at those materials?

22 **A. Yesterday.**

23 Q. When did you first get a copy of
24 Dr. Richard Lewis' report?

25 **A. I'm not certain of the date, but I think it**

1 **would be -- my best guess is that it was about the**
2 **beginning of this year, maybe January or February.**
3 **I'm not certain on that.**

4 Q. Were you asked to do anything with it?

5 **A. I was asked to read it and consider his**
6 **statements in the report, and then I discussed that**
7 **with Mr. Altman.**

8 Q. Did Mr. Altman ask you to prepare any sort
9 of rebuttal report?

10 **A. No, he did not.**

11 MR. ALTMAN: Marcel, I'm going to
12 object to the extent that -- if we're continuing to
13 say that Dr. Thorne is an expert with respect to this
14 as opposed to a consultant, I don't have a problem,
15 but I'm warning -- I'm warning you that you are
16 opening up the door to this testimony coming in.

17 MR. DUHAMEL: All I wanted to know was
18 whether he had been asked to prepare a rebuttal
19 report.

20 Q. (BY MR. DUHAMEL) And I understand the
21 answer is "no"; is that correct?

22 **A. The answer is no.**

23 MR. ALTMAN: Same objection.

24 Q. I'm sorry. I can't hear the answer.

25 **A. The answer is no.**

1 MR. DUHAMEL: Thank you. I have
2 nothing further, subject to my right to redirect if
3 Mr. Altman asks any questions.

4 EXAMINATION
5 BY MR. ALTMAN:

6 Q. Yes. Dr. Thorne.

7 A. Yes.

8 Q. Dr. Thorne, this is Dave Altman.

9 As you sit there today in Iowa, do you know
10 of any compound in your report that is solely there
11 at the suggestion of my office?

12 A. No.

13 Q. And this last question is one merely of
14 clarification. The Cox, Colvin material, the summary
15 of the area investigation that you mentioned, what
16 did that generally consist of?

17 A. It generally consisted of findings from a
18 soil gas investigation to look at compounds in the
19 soil and water on the premises of the facility, and
20 that showed -- it demarcated plumes or concentration
21 profiles of the assessed compounds, indicating where
22 there were positive findings or what you might call
23 hot spots. And some of these were within the
24 facility, underneath the -- within the building
25 itself or on the properties. Some of them were at

1 the edge of the property and were, if you will,
2 semicircles, showing partially the extent of the
3 plume on the facility grounds, but then just going to
4 the edge of the property itself.

5 And then there was some language about the
6 quality control and the methodology and so forth.
7 And some of the -- some of the sites -- some of the
8 test sites showed levels for compounds below limits
9 of detection. Others showed limits in the hundreds
10 of parts -- hundreds of thousands of parts per
11 billion by volume, as I recall.

12 MR. ALTMAN: Thank you. I don't have
13 any further questions at this time.

14 MR. DUHAMEL: Neither do I.

15 Dr. Thorne, thank you very much for
16 your cooperation today. I appreciate your bearing
17 with us as we made arrangements for this video
18 deposition. This sort of thing is not always the
19 most convenient to put together, but it was better
20 than Mr. Altman and I having to travel out, so I
21 appreciate your willingness to do it this way. Thank
22 you, Doctor. I have nothing further.

23 THE WITNESS: I appreciate your
24 patience with this method as well. Thank you.

25 MR. ALTMAN: Thank you very much.

1 (The deposition was concluded at
2 12:19 p.m., June 6, 2006.)

3 *****

4 MR. DUHAMEL: I am ordering. I would
5 like, in addition to a hard copy, electronic
6 transmission.

7 MR. ALTMAN: And if you could call my
8 office, I've got somebody over there that knows what
9 we order. We do want a hard copy and electronic, I
10 can tell you that.
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1 CERTIFICATE OF COURT REPORTER

2 I, Tammy Jones, a Certified Shorthand Reporter
3 in and for the States of Iowa and Illinois, do hereby
4 certify that the facts as stated in the caption
5 hereto are true; that the witness named on the face
6 sheet was by me sworn to testify to the truth and
7 nothing but the truth concerning the matters in
8 controversy in this cause; that said witness was
9 thereupon examined on oath and the examination
10 reduced to writing under my supervision, consisting
11 of the foregoing pages; and the computer-aided
12 transcript is a true record of the testimony given by
13 said witness and all objections made.

14 I further certify that I am neither attorney
15 or counsel for, nor related to or employed by, any of
16 the parties to the action in which this deposition is
17 taken; and, further, that I am not a relative or
18 employee of any attorney or counsel employed by the
19 parties hereto or financially interested in the
20 action.

21 I further certify that charges for the
22 preparation of the foregoing completed deposition,
23 original thereof, were charged to the attorneys for
24 the Defendants.

25 In witness whereof I have hereunto set
my hand this 16th day of June, 2006.

Tammy Jones
Certified Shorthand Reporter
Iowa No. 1213
Illinois No. 084-003947
2516 East 40th Street
Davenport, Iowa 52807-1553

TJ/(bf)

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